Application No. 10/724,108 Reply to Office Action of November 15, 2006 and the Advisory Action dated March 29, 2007

## IN THE CLAIMS

Please amend the claims as follows:

Claims 1-13 (Cancelled)

14. (Currently Amended) A method of constructing a *Schizosaccharomyces pombe* yeast cell which produces a heterologous protein, comprising

deleting or inactivating at least one <u>S. pombe</u> gene encoding at least one an enzyme selected from the group consisting of pyruvate decarboxylase, aspartic protease, serine protease, aminopeptidase, and carboxypeptidase dipeptidyl aminopeptidase, cytoplasmic aminopeptidase, aspartic protease, pyruvate decarboxylase pdc1, serine protease isp 6, aminopeptidase, carboxypeptidase, carboxypeptidase, vacuolar carboxylase S, zinc protease, zinc protease, metalloprotease, zinc metalloprotease, CAAX prenyl protease I, dipeptidyl peptidase, dipeptidase, methionine metallopeptidase, methionine aminopeptidase, signal peptidase, and mitochondrial peptidase β subunit; and

transforming the *Schizosaccharomyces pombe* yeast cell with a polynucleotide which encodes the heterologous protein,

wherein the deletion or inactivation of the at least one gene results in increased production of the heterologous protein compared to a *Schizosaccharomyces pombe* yeast cell in which the at least one gene has not been deleted or inactivated.

- 15. (Previously Presented) The method of Claim 14, wherein the at least one enzyme is a pyruvate decarboxylase.
- 16. (Previously Presented) The method of Claim 14, wherein the at least one enzyme is an aspartic protease.

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- 17. (Previously Presented) The method of Claim 14, wherein the at least one enzyme is a serine protease.
- 18. (Previously Presented) The method of Claim 14, wherein the at least one enzyme is an aminopeptidase.
- 19. (Previously Presented) The method of Claim 14, wherein the at least one enzyme is a carboxypeptidase.
- 20. (Currently Amended) A method of producing a heterologous protein, comprising constructing a *Schizosaccharomyces pombe* yeast cell which produces a heterologous protein by deleting or inactivating at least one gene encoding at least one enzyme selected from the group consisting of pyruvate decarboxylase, aspartic protease, serine protease, aminopeptidase, and carboxypeptidase in which at least one *S. pombe* gene is deleted or inactivated, wherein the at least one *S. pombe* gene encodes an enzyme selected from the group consisting of dipeptidyl aminopeptidase, cytoplasmic aminopeptidase, aspartic protease, pyruvate decarboxylase pdc1, serine protease isp 6, aminopeptidase, carboxypeptidase, carboxypeptidase, vacuolar carboxylase S, zinc protease, zinc protease, metalloprotease, zinc metalloprotease, CAAX prenyl protease I, dipeptidyl peptidase, dipeptidase, methionine metallopeptidase, methionine aminopeptidase, signal peptidase, and mitochondrial peptidase β subunit; and

transforming the *Schizosaccharomyces pombe* yeast cell with a polynucleotide which encodes the heterologous protein,

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wherein the deletion or inactivation of the at least one gene results in increased

production of the heterologous protein compared to a Schizosaccharomyces pombe yeast cell

in which the at least one gene has not been deleted or inactivated;

culturing the yeast cell constructed such that the heterologous protein is produced by

the yeast cell; and collecting the heterologous protein.

21. (Previously Presented) The method of Claim 20, wherein the at least one enzyme

is a pyruvate decarboxylase.

22. (Previously Presented) The method of Claim 20, wherein the at least one enzyme

is an aspartic protease.

23. (Previously Presented) The method of Claim 20, wherein the at least one enzyme

is a serine protease.

24. (Previously Presented) The method of Claim 20, wherein the at least one enzyme

is an aminopeptidase.

25. (Previously Presented) The method of Claim 20, wherein the at least one enzyme

is a carboxypeptidase.

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